

D-2

GRANITE SPECIFICATION FOR CURB, WHEELCHAIR RAMP AND LAWN CURB

Description

This work consists of constructing or resetting of [granite curb](#), granite wheelchair ramps and granite lawn curb.

Materials

Materials shall conform to the following:

Bed course material shall consist of cinders, sand, slag, gravel, or crushed stone passing a 1/2 inch square mesh sieve.

Joint filler shall be a hot poured elastic type sealant conforming to AASHTO M 173.

Joint mortar shall consist of one part masonry cement and two parts fine aggregate by volume. The mortar shall have a minimum 28-day compressive strength of 2,100 psi when tested in accordance with ASTM C 780. The mortar shall have an air content of 15% \pm 3% when tested in accordance with AASHTO T 152 or AASHTO T 199.

Masonry cement shall conform to the requirements of ASTM C 91.

Portland cement shall conform to the requirements of AASHTO M 85.

Fine aggregate shall conform to AASHTO M 45.

Water shall conform to the requirements of AASHTO M 157. The water shall contain no substances that would be detrimental to the finished product. Potable water of known quality may be used without testing.

Granite curb and lawn curb shall consist of the following requirements:

- a. Granite shall comply with requirements of the National Building Granite Quarries Association (NBGQA) for tolerances, color and finish qualities.
- b. Granite stone shall have characteristics as defined by ASTM C-119 and C-615, and possess physical characteristics specified herein, in accordance with the following ASTM test references:
 1. Abrasion resistance of stone, subject to foot traffic, ASTM-241.
 2. Absorption of natural building stone, ASTM-C-97.
 3. Compressive strength of natural building stone, ASTM-C-170.

4. Modulus of Rupture of natural building stone, ASTM-C-99.
- c. The Contractor shall furnish certificates, obtained from the stone supplier, attesting that the stone be based on independent testing laboratory tests made within the last 5 years.
 - d. First quality granite shall be hard and durable, of a uniform or similar color, grain, size and texture, free from seams, cracks, or other imperfections, and have a smooth splitting character. It shall be clean, and show no evidence of any iron rust or iron particles.
 - e. Granite stone shall be sawn finish "Mount Airy" as supplied by North Carolina Granite Company, or approved equal. Stone shall be obtained from a single quarry owned and operated by the fabricator.
 - f. When stone is sawed, all surfaces that are to be exposed shall be thoroughly cleaned and any iron rust or iron particles removed by sandblasting or other approved methods satisfactory to the Contracting Officer's Representative (COR). Saw marks in excess of 1/8 inch shall be removed.
 - g. The stone shall be cut to the dimensions and configurations shown on the plans, with the tolerance being plus or minus 1/4 inch in any dimension, and 1/8 inch plus or minus from the top surface plane. Wheelchair ramps shall have a 4 inch minimum thickness with all edges vertical for joining.
 - h. Wheelchair ramps shall be finished with a No. 4 cut parallel to the curbline and to an approximately true plane.
 - i. Blocks, shall be fabricated with "Lewis" type, or approved equal, lifting holes extending no closer than 2 inches from the Finished Face.
 - j. Dress joints (bed and vertical) straight and at 90 degree angle to the face unless otherwise shown or required. Stone shall be cut to provide uniform 1/4 inch wide joints.
 - k. The top surfaces shall be thermal finish, free of drill holes and surface imperfections. Back surfaces shall be flame cut or split approximately at right angles to the plane of the top surface. No projections or depressions greater than 1/4 inch will be allowed for a distance of 4 inches down from the top. The remaining distance shall have no projections or depressions greater than 1 inch. Drill holes will be permitted in the back surface but shall not show in the top arris line.
 - l. The front face of curb and lawn curb stones shall be finished the same as top surface for full depth of reveal plus 2-1/2 inches, and the arris line between the top and the face shall have a 1/4 inch bullnose.
 - m. Ends of all curb and lawn curbstone shall be square with the planes to top and face, and so finished that, when stones are set, no space more than 1/4 inch shall show in the joint for the full width of the top or down the face for 8 inches from the plane of the joint.

- n. The minimum length of curb and lawn curb stones shall be 4 feet, unless otherwise shown on the drawings.

The Contractor shall only employ workers skilled in this class of work to ensure that the finished work meets the requirements specified.

Construction Requirements

Bedding. Excavate or backfill to the required grade. Place and compact bed course material.

Stone Curb, Wheelchair Ramps, and Lawn Curb. The Contractor shall provide a 18-inch by 18-inch by 1-inch sample indicating the actual color, textures, finish and workmanship to be executed in the final work. No damaged, chipped, broken, discolored, stained or otherwise defective material shall be submitted as a sample.

Stone shall be protected against moisture, freezing, soiling, staining and physical damage during storage and construction.

Stone shall be handled so as to prevent chipping, breakage, soiling, or other damage. Devices such as pinch bars or wrecking bars shall not be used without protecting the edges of the stone with wood or similar material. Wide-belt type slings or vacuum lifts shall be used, rather than wire rope, or ropes containing tar or other substances which might cause staining. If required, wood rollers shall only be used if cushioning is provided at the end of the wood slide.

Stone shall be stored on wood skids or pallets, covered with nonstaining waterproof membrane, but allowing the air to circulate around the stone.

Stonework fabrication shall be accomplished by skilled mechanics. Stone shall be cut, for necessary adjustments, only with saws or other devices used in the original shop fabrication process.

Stone shall be cleaned before installation by scrubbing with fiber brushes, followed by a thorough rinsing with clear water. Only mild cleaning compounds containing no hard fillers or abrasives shall be used.

Wet stone immediately before setting. Set stone in bed course material so the face and top lines are to line and grade. Make the joints a maximum of 1 inch wide and fill the joints with mortar. Complete the first 25 feet of curb to demonstrate the ability to build a curb meeting these requirements. This section shall have been approved by the COR before continuing the construction.

Joints shall be constructed as shown on the drawings except when concrete pavement is to be constructed contiguous to the curb. In that case, construct the joints in the curb directly in line with the pavement expansion joints. Make the curb joint 3/4 inch wide and fill it with expansion joint filler of the same nominal thickness as the pavement joint. Fill all voids between the joint filler and the curb with mortar. Additional joints shall only be constructed upon approval by the COR.

The surface of the wheelchair ramp shall be flush with the granite curb where they meet and the back edges shall be set carefully to grade so as to be flush with the sidewalk.

In the setting of the wheelchair ramp, the joint space between the sections of ramp shall be 1/8 inch.

A joint space of 1/4 inch with 1/4 inch preformed expansion joint filler shall be provided between the ramp and the curb.

Resetting Stone Curb and Lawn Curb. Carefully remove, clean, and store the curb. Cut or fit the curb as necessary for installation. Replace all lost, damaged, or destroyed curb.

Measurement

Curb and lawn curb, both new and reset, will be measured by the linear foot along the front face of the section at the finished grade elevation. No deduction in length will be made for drainage structures installed in the curb section or for driveway openings where the gutter is carried across the drive.

Granite wheelchair ramps will be measured by the square yard.

Samples will not be measured for payment.

Payment

The accepted quantities, measured as provided above, will be paid at the contract price per unit of measurement for the pay items listed below. Payment will be full compensation for the work prescribed above.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Granite curb, _____ inch depth	Linear foot
Granite lawn curb	Linear foot
Reset granite curb	Linear foot
Reset granite lawn curb	Linear foot
Granite wheelchair ramp yard	Square

[Return to Index of Details and Specifications](#)

[Return to Table of Contents](#)